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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/738,264	12/15/2000	Thomas Schmitz	F0055	1428
7590 08/24/2004 Lawrence G. Fridman, Esq. Silber & Fridman 66 Mount Prospect Ave. Clifton, NJ 07013-1918			EXAMINER JERABEK, KELLY L	
			ART UNIT 2612	PAPER NUMBER

DATE MAILED: 08/24/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/738,264

Applicant(s)

SCHMITZ ET AL.

Examiner

Kelly L. Jerabek

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 December 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 2/25/2002.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: "42" is not in figure 1. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Priority

Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on 12/17/1999. It is noted, however, that applicant has not filed a certified copy of the application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3-5, 7-9, 11-12, and 14 rejected under 35 U.S.C. 102 (b) as being anticipated by Konishi et al. US 5,420,635.

Re claim 1, Konishi discloses in figure 5 a still video camera including an image detector (14) for the generation of a first digital picture (preliminary imaging). The still video camera performs preliminary imaging and first and second formal imaging (col. 15, lines 17-19). The preliminary imaging is used to determine the proper exposure for the first and second formal imaging (col. 15, lines 20-22). As shown in figure 1, a

subject includes a dark area (SL) and a bright area (SH) (col. 15, lines 61-68). When the first amount of exposure for the dark portion (SL) and the second amount of exposure for the bright portions (SH) are determined, the diaphragm (12) and shutter (13) of the camera are controlled to perform a first formal imaging and the digital image data captured by the CCD (14) is stored in a first frame memory (21) (col. 17, lines 53-68). Next, the diaphragm (12) and shutter (13) of the camera are controlled to perform a second formal imaging and the digital image data captured by the CCD (14) is stored in a second frame memory (22) (col. 18, lines 1-13). Therefore, the camera includes picture data memory (21,22). Also, the camera generates exposure values from the first digital picture data (preliminary imaging) and uses the exposure values to generate second picture data representing a dark picture (first formal imaging) and third picture data representing a bright picture (second formal imaging) (col. 17, line 53 – col. 18, line 13). The second and third picture data are stored in picture data memories (21,22).

Re claim 3, figure 3a shows the effect of capturing an image under a relatively large exposure and figure 3b shows the effect of capturing an image under a relatively small exposure (col. 14, lines 36-47). The image (SH_a) of figure 3a is replaced with image (SH_b) of figure 3b in order to obtain the inlaid composite image by synthesis as shown in figure 1 (col. 14, lines 48-65). Therefore, the method of inlaying the images by synthesis can be read as a picture balancing means for optimizing the picture data of the dark and bright pictures.

Re claim 4, figure 4 discloses a histogram of an image obtained by inlaying the images by synthesis as described above (col. 14, lines 62-65). Therefore, a digital histogram of data (SL2, SH2) from a previously taken picture is provided and the picture is balanced relative to the histogram.

Re claim 5, figure 27 shows circuitry for processing video signals obtained by a CCD including color filters (col. 35, lines 50-61). A first video signal representing a dark color image is sent to a first horizontal transfer path (163) and the second video signal representing a bright color image is sent to a second horizontal path (165) (col. 35, lines 62-68). Inlaying synthesis processing as disclosed in claim 1 is performed on these two signals (col. 36, lines 8-23). Therefore, it can be seen that the histogram of an image obtained by inlaying images by synthesis as shown in figure may also include color data since inlaying synthesis processing is also performed on the color image data provided by a CCD including color filters as disclosed in figure 27.

Re claim 7, the histogram contains brightness value data (luminance) (fig. 4).

Re claim 8, figure 3a shows the effect of capturing an image under a relatively large exposure and figure 3b shows the effect of capturing an image under a relatively small exposure (col. 14, lines 36-47). The image (SH_a) of figure 3a is replaced with image (SH_b) of figure 3b in order to obtain the inlaid composite image by synthesis as

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shown in figure 1 (col. 14, lines 48-65). Therefore, the method of inlaying the images by synthesis can be read as a mixing means for superimposing dark and bright pictures.

Re claim 9, see claim 1.

Re claim 11, see claim 5.

Re claim 12, see claim 7.

Re claim 14, see claim 8.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 2 rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi in view of Ikeda et al. US 6,204,881.

Re claim 2, Konishi discloses all of the limitations of claim 1 above. Additionally, Konishi states that the CCD (14) has a dynamic range that can only correspond to a scene in which the average luminance of the bright portion of the scene is two to three times the luminance of the dark portion (col. 13, line 68 – col. 14, line 3). Therefore, it can be seen that the image detector (14) has a first dynamic range extending over a first number of digits. However, Konishi fails to distinctly state that the second digital picture data has a second number of low significance digits and the third digital picture data has a third number of high significance digits, the second and third numbers being smaller than the first number.

Ikeda discloses in figure 4 an image data processing apparatus capable of expanding the dynamic range of image data captured by an image sensing device (4) (col. 7, lines 45-65). As shown in figure 5, bar (12) represents image data where the dynamic range is enlarged by the combining process (col. 8, lines 25-34; col. 9, lines 41-42). Bars (10,10') represent image data obtained with increased exposure ("bright image data") and bars (11,11') represent image data obtained with decreased exposure ("dark image data") (col. 8, lines 29-34). It can be seen in figure 5, that bars (10,10') representing image data obtained with increased exposure ("bright image data") and bars (11,11') representing image data obtained with decreased exposure ("dark image data") are smaller than bar (12) representing the combined image data (col. 8, line 25 – col. 9, line 50). Therefore, it can be seen that a second number of low significance digits are read (bars (11,11') "dark image data") and a third number of high significance digits are read (bars (10, 10') "bright image data") and figure 5 clearly shows that the

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second and third numbers are smaller than the first number (bars 10 and 11 are smaller than bar 12). Therefore, it would have been obvious for one skilled in the art to have been motivated to include the image data processing apparatus capable of expanding the dynamic range of image data as disclosed by Ikeda in the still video camera providing a composite image disclosed by Konishi. Doing so would provide a means for obtaining a plurality of luminance and color signals in one image-sensing operation and combining the plurality of signals into one signal having a wide dynamic range (Ikeda: col. 4, lines 37-45).

Claims 6, 10, and 13 rejected under 35 U.S.C. 103(a) as being unpatentable over Konishi in view of R.C. Gonzales "Digital Image Processing".

Re claims 6 and 10, Konishi discloses all of the limitations of claims 4 and 9 above. However, Konishi fails to distinctly state that the histogram contains gray value data.

Gonzales discloses a variety of image enhancement techniques. Gonzales states that digital images may be enhanced using histograms containing gray value data (page 149). Therefore, it would have been obvious for one skilled in the art to have been motivated to include an image enhancing technique including a histogram containing gray value data as disclosed by Gonzales in the still video camera providing a composite image disclosed by Konishi. Doing so would provide a means for

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processing a given image so that the result is more suitable than the original image (Gonzales: page 139).

Re claim 13, Gonzales states that image enhancement may be performed based on the intensity mean and variance (contrast) values of the image (page 159). Therefore, the contrast values of picture data may be balanced.

Contacts

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kelly L. Jerabek whose telephone number is 703-305-8659. The examiner can normally be reached on Monday - Friday (8:00 AM - 5:00 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wendy Garber can be reached on 703-305-4929. The fax phone number for submitting all Official communications is 703-872-9306. The fax phone number for submitting informal communications such as drafts, proposed amendments, etc., may be faxed directly to the Examiner at 703-746-3059.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

KLJ



NGOC-YEN VU
PRIMARY EXAMINER